DOCUMENT RESUME

ED 228 460 CE 035 599

TITLE	Develop Student Performance Objectives. Second Edition. Module B-2 of Category B--Instructional Planning. Professional Teacher Education Module Series.
INSTITUTION	Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY	Department of Education, Washington, DC.
REPORT NO	ISBN-0-89606-125-6
PUB DATE	83
NOTE	59p.; For related documents, see CE 035 514, CE 035 530, and note on ED 225 008.
AVAILABLE FROM	American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, University of Georgia, Athens, GA 30602 (Write for price).
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Behavioral Objectives; *Competence; *Competency Based Education; *Course Objectives; Educational Objectives; Learning Activities; Learning Modules; Postsecondary Education; Secondary Education; Student Educational Objectives; *Teacher Education; Units of Study; *Vocational Education

ABSTRACT

This module is one of a series of 127 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational teachers. The competencies upon which these modules are based were identified and verified through research as being important to successful vocational teaching at both the secondary and postsecondary levels of instruction. This module is designed to give inservice and preservice vocational teachers skill in writing student performance objectives that spell out for themselves, their students, and prospective employers exactly what is expected of students in that program. In addition, it provides experience in sequencing student performance objectives to ease student learning. The module contains a terminal objective augmented by five enabling objectives. The enabling objectives are linked to six learning experiences each of which contain an overview, learning activities, and a self-check. The final learning experience provides for an actual teaching situation and an assessment by a resource person. A list of the outside resources that supplement those contained within the module is included in the package. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED228460

MODULE
B-2

Develop Student Performance Objectives

Second Edition

Module B-2 of Category B—Instructional Planning
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

The National Center for Research in Vocational Education
The Ohio State University

Key Program Staff:
James B. Hamilton, Program Director
Robert E. Norton, Associate Program Director
Glen E. Fardig, Specialist
Lois G. Harrington, Program Assistant
Karen M. Quinn, Program Assistant

Second Edition. Copyright © 1983 by The National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210.

Copyright is claimed until full term. Thereafter all portions of this work covered by this copyright will be in the public domain.

This work was developed under a contract with the Department of Education. However, the content does not necessarily reflect the position or policy of that Agency, and no official endorsement of these materials should be inferred.

1983

ISBN 0-89606-125-6

Published and distributed by the **American Association for Vocational Instructional Materials (AAVIM)**, 120 Driftmier Engineering Center, University of Georgia, Athens, Georgia 30602, (404) 542-2586.

CE035599

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

C. Hamilton

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FOREWORD

This module is one of a series of 127 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational teachers. The competencies upon which these modules are based were identified and verified through research as being important to successful vocational teaching at both the secondary and postsecondary levels of instruction. The modules are suitable for the preparation of teachers and other occupational trainers in all occupational areas.

Each module provides learning experiences that integrate theory and application; each culminates with criterion-referenced assessment of the teacher's (instructor's, trainer's) performance of the specified competency. The materials are designed for use by teachers-in-training working individually or in groups under the direction and with the assistance of teacher educators or others acting as resource persons. Resource persons should be skilled in the teacher competencies being developed and should be thoroughly oriented to PBTE concepts and procedures before using these materials.

The design of the materials provides considerable flexibility for planning and conducting performance-based training programs for preservice and inservice teachers, as well as business-industry-labor trainers, to meet a wide variety of individual needs and interests. The materials are intended for use by universities and colleges, state departments of education, postsecondary institutions, local education agencies, and others responsible for the professional development of vocational teachers and other occupational trainers.

The PBTE curriculum packages in Categories A – J are products of a sustained research and development effort by the National Center's Program for Professional Development for Vocational Education. Many individuals, institutions, and agencies participated with the National Center and have made contributions to the systematic development, testing, revision, and refinement of these very significant training materials. Calvin J. Cotrell directed the vocational teacher competency research study upon which these modules are based and also directed the curriculum development effort from 1971 – 1972. Curtis R. Finch provided leadership for the program from 1972 – 1974. Over 40 teacher educators provided input in development of initial versions of the modules; over 2,000 teachers and 300 resource persons in 20 universities, colleges, and postsecondary institutions used the materials and provided feedback to the National Center for revisions and refinement.

Early versions of the materials were developed by the National Center in cooperation with the vocational teacher education faculties at Oregon State University and at the University of Missouri – Columbia. Preliminary testing of the materials was conducted at Oregon State University, Temple University, and the University of Missouri – Columbia.

Following preliminary testing, major revision of all materials was performed by National Center staff, with the assistance of numerous consultants and visiting scholars from throughout the country.

Advanced testing of the materials was carried out with assistance of the vocational teacher educators and students of Central Washington State College; Colorado State University; Ferris State College, Michigan; Florida State University; Holland College, P.E.I., Canada; Oklahoma State University; Rutgers University, New Jersey; State University College at Buffalo, New York; Temple University, Pennsylvania; University of Arizona; University of Michigan–Flint; University of Minnesota–Twin Cities; University of Nebraska–Lincoln; University of Northern Colorado; University of Pittsburgh, Pennsylvania; University of Tennessee; University of Vermont; and Utah State University.

The first published edition of the modules found widespread use nationwide and in many other countries of the world. User feedback from such extensive use, as well as the passage of time, called for the updating of the content, resources, and illustrations of the original materials. Furthermore, three new categories (K–M) have been added to the series, covering the areas of serving students with special/exceptional needs, improving students' basic and personal skills, and implementing competency-based education. This addition required the articulation of content among the original modules and those of the new categories.

Recognition is extended to the following individuals for their roles in the revision of the original materials: Lois G. Harrington, Catherine C. King-Fitch and Michael E. Wonacott, Program Associates, for revision of content and resources; Cheryl M. Lowry, Research Specialist, for illustration specifications; and Barbara Shea for art work. Special recognition is extended to George W. Smith Jr. , Art Director at AAVIM, for supervision of the module production process.

Robert E. Taylor
Executive Director
The National Center for Research in Vocational Education

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research.
- Developing educational programs and products.
- Evaluating individual program needs and outcomes.
- Providing information for national planning and policy.
- Installing educational programs and products.
- Operating information systems and services.
- Conducting leadership development and training programs.

AAVIM
AMERICAN ASSOCIATION FOR VOCATIONAL INSTRUCTIONAL MATERIALS
University of Georgia
120 Driftmier Engineering Center
Athens, GA 30602

The American Association for Vocational Instructional Materials (AAVIM) is a nonprofit national institute.

The institute is a cooperative effort of universities, colleges and divisions of vocational and technical education in the United States and Canada to provide for excellence in instructional materials.

Direction is given by a representative from each of the states, provinces and territories. AAVIM also works closely with teacher organizations, government agencies and industry.

INTRODUCTION

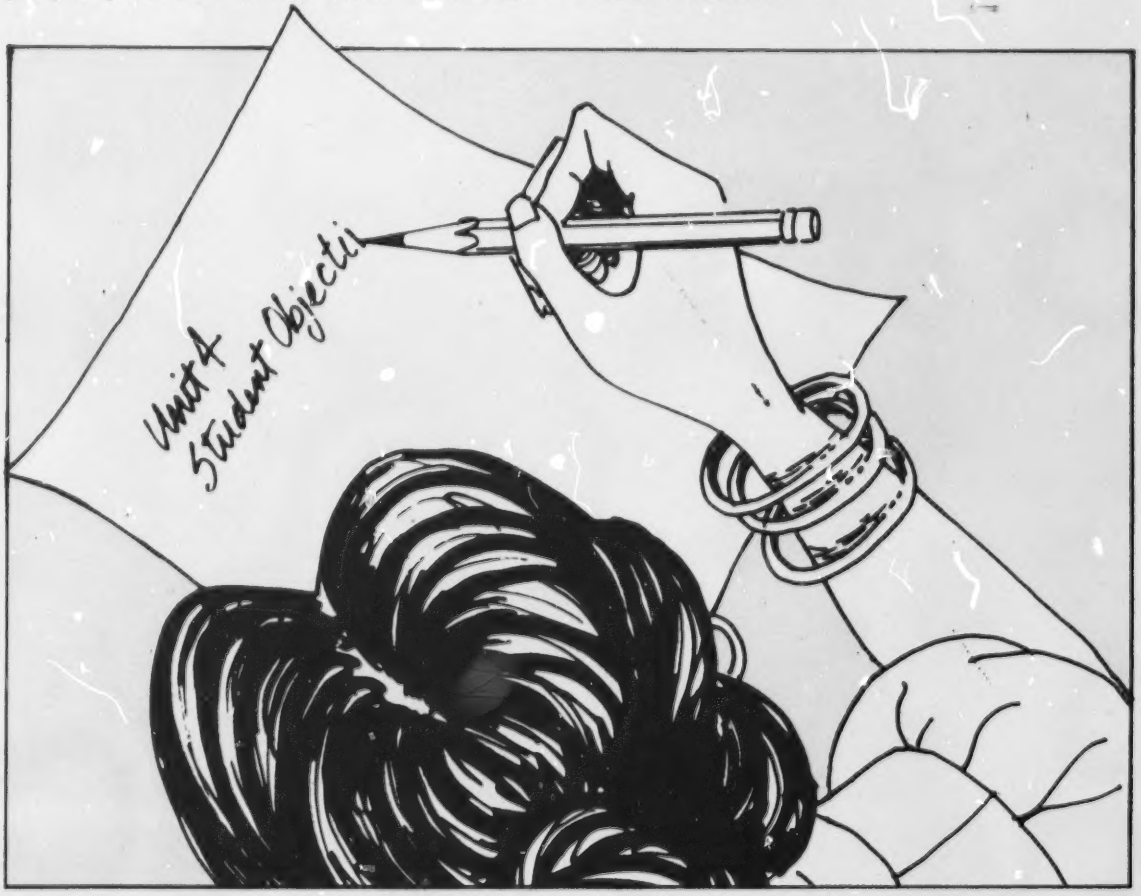
As a vocational-technical teacher, you are responsible for helping your students achieve entry-level competency in the occupation for which they are preparing. Occupational analyses can reveal what these entry-level competencies are, and courses of study, curriculum guides, and competency profiles can indicate what students should be able to do when they leave the program or complete a particular course.

However, as you plan the units, lessons, or learning activity packages that make up the course you are teaching, you will need to be able to translate this information into precise statements describing the knowledge, skills, and attitudes you want your students to achieve. In other words, you will need to be able to write student performance objectives.

In some cases, student performance objectives will already have been written for the course you are teaching. In that case, you have a responsibility as you plan your instruction to consider the needs, interests, and abilities of your particular students. Then you need to add to, delete from, or revise those student performance objectives to reflect what you know about your students.

This module is designed to give you skill in writing student performance objectives for your program that spell out for you, your students, and prospective employers exactly what is expected of students in that program. In addition, it will give you experience in sequencing student performance objectives to ease student learning.

NOTE: Performance objectives are used at all levels of instruction and in many different instructional approaches. However, in competency-based education (CBE) programs, objectives may take a different form than in more conventional programs and may be seen as "enablers," or subobjectives. Specific coverage of the use of objectives in a CBE program is provided in Category K: Competency-Based Education.



ABOUT THIS MODULE

Objectives

Terminal Objective: While working in an actual school situation, develop student performance objectives. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 55–56 (*Learning Experience VI*).

Enabling Objectives:

1. After completing the required reading, demonstrate knowledge of the rationale for developing student performance objectives and the characteristics of properly stated objectives (*Learning Experience I*).
2. After completing the required reading, analyze and (if necessary) rewrite given student performance objectives (*Learning Experience II*).
3. After completing the required reading, identify each of the objectives on a given list as being primarily cognitive, psychomotor, or affective (*Learning Experience III*).
4. Using resources that provide vocational-technical program content information, develop student performance objectives, in each of the learning domains, that contain statements of performance, condition, and criterion (*Learning Experience IV*).
5. After completing the required reading, sequence a given list of student performance objectives (*Learning Experience V*).

Resources

A list of the outside resources that supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions or in assessing your progress at any time.

Learning Experience I

Optional

Reference: Mager, Robert F. *Preparing Instructional Objectives*. Second Edition. Belmont, CA: Pitman Learning, Inc., 1975.

A resource person and/or peers with whom you can meet to discuss or apply the material in the required or optional readings.

Resources (e.g., curriculum guides, courses of study, textbooks) in your occupational specialty from which you can obtain student performance objectives to critique.

Learning Experience II

Optional

Reference: Mager, Robert F. *Preparing Instructional Objectives*. Second Edition. Belmont, CA: Pitman Learning, Inc., 1975.

A resource person and/or peers with whom you can meet to analyze additional student performance objectives.

Resources (e.g., curriculum guides, courses of study, textbooks) in your occupational specialty from which you can obtain student performance objectives to analyze.

Learning Experience III

Optional

Reference: Bloom, Benjamin S., ed. *Taxonomy of Educational Objectives: Handbook I: Cognitive Domain*. New York, NY: Longman Inc., 1977.

Reference: Krathwohl, David R.; Bloom, Benjamin S.; and Masia, Bertram B. *Taxonomy of Educational Objectives: Handbook II: Affective Domain*. New York, NY: Longman Inc., 1969.

A resource person and/or peers with whom you can discuss the learning domains.

Learning Experience IV

Required

Resources (e.g., curriculum guides, courses of study, textbooks) in your occupational specialty to provide program content from which you can develop student performance objectives.

A resource person to evaluate your competency in developing well-stated student performance objectives in each of the learning domains.

Learning Experience V

No outside resources

Learning Experience VI

Required

An actual teaching situation in which you can develop student performance objectives.

A resource person to assess your competency in developing student performance objectives.

General Information

For information about the general organization of each performance-based teacher education (PBTE) module, general procedures for its use, and terminology that is common to all the modules, see About Using the National Center's PBTE Modules on the inside back cover. For more in-depth information on how to use the modules in teacher/trainer education programs, you may wish to refer to three related documents:

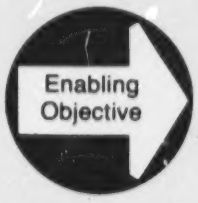
The *Student Guide to Using Performance-Based Teacher Education Materials* is designed to help orient preservice and inservice teachers and occupational trainers to PBTE in general and to the PBTE materials.

The *Resource Person Guide to Using Performance-Based Teacher Education Materials* can help prospective resource persons to guide and assist preservice and inservice teachers and occupational trainers in the development of professional teaching competencies through use of the PBTE modules. It also includes lists of all the module competencies, as well as a listing of the supplementary resources and the addresses where they can be obtained.

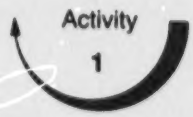
The *Guide to the Implementation of Performance-Based Teacher Education* is designed to help those who will administer the PBTE program. It contains answers to implementation questions, possible solutions to problems, and alternative courses of action.

Learning Experience I

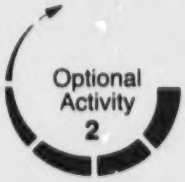
OVERVIEW



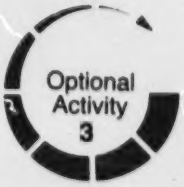
After completing the required reading, demonstrate knowledge of the rationale for developing student performance objectives and the characteristics of properly stated objectives.



You will be reading the information sheet, The Need for Precise Student Performance Objectives, pp. 6–8.



You may wish to read the following supplementary reference: Mager, *Preparing Instructional Objectives*, pp. 1–24.



You may wish to meet with your resource person and/or peers to further discuss the information in the reading(s).

You will be demonstrating knowledge of the rationale for developing performance objectives and the characteristics of properly stated objectives by completing the Self-Check, pp. 9–11.

You will be evaluating your competency by comparing your completed Self-Check with the Model Answers, pp. 13–14.

Activity 1

Are instructional objectives of any real help to teachers? Why must they be stated in such precise terms? To find out how both you and your students can benefit from precisely stated, written student performance objectives, read the following information sheet.

THE NEED FOR PRECISE STUDENT PERFORMANCE OBJECTIVES

There once was a teacher who said,
"Writing objectives makes me see red.
I know what to teach
And the students I reach,
So why share what I have in my head?"

To a certain extent the above limerick communicates the feelings that some educators have about student performance objectives. There are demands upon all educators, however, to be accountable for the educational process. In addition, vocational-technical educators must be responsive to the needs of the industry for which they are preparing students.

Therefore, it is necessary to **identify** the intended outcomes of the educational process. Student performance objectives identify these outcomes.

The need for developing student performance objectives can also be viewed from the perspective of the students, the teacher, and the vocational-technical program.

For the **students,** these objectives provide important information about what is expected of them in the educational program. They describe the activities that students must accomplish in order to complete the program successfully. These objectives also outline the criteria upon which students' achievement will be measured.

Thus, students can determine at any point within the program what they have accomplished and how much remains to be completed. In addition, if a student misses a portion of the program because of illness, he/she can identify what must be done to complete the missed work. Or, if a student has previous experience in a certain area, he/she can determine what student performance objectives he or she has already achieved and work on those objectives that still need to be accomplished.

Another advantage is that, once the expected level of performance has been identified for each student performance objective, the additional experience/practice the students may need in order to reach that level can be outlined. Finally, there is considerable evidence to indicate that, when students know the objectives of the lesson in advance, their learning is increased.

For the **teacher,** student performance objectives provide the necessary blueprint for the instructional process for which he/she is responsible. These objectives should define the skills, knowledge, and attitudes necessary for entry into the occupation. This is helpful because some teachers tend to stress subject matter and skill development in selected areas within the program based on personal preference rather than occupational requirements.

For example, a typing teacher may devote much time and energy to speed-building exercises and little time on other aspects of the program. By basing the student performance objectives on the requirements of the occupation for which students are being prepared, the program can be delivered in an organized fashion and the achievement of the necessary skills can be measured.

In terms of the **program,** student performance objectives identify for the industry those skills that graduates of the program can be expected to possess. Clearly stated objectives can give a prospective employer a good idea of what a student coming from your program can do. And, as occupational skills change, the objectives can be changed to match the new expectations.

In addition, the development of student performance objectives establishes a base for program evaluation. Questions about whether the graduates will be able to meet the needs of industry can be addressed through the careful examination of how well they are achieving the objectives—rather than through the subjective feelings of individuals involved in the evaluation process.

You also need to understand what student performance objectives do **not** do. Because these objectives are written in terms of the student's knowledge, skills, and attitudes, they do not necessarily define the teaching or learning activities that should be used to achieve them. Most student performance objectives allow for any number of ways of getting to the final outcome. They define what the outcome must be, but not how to get there.

For example, consider the following student performance objective: *Given leaf samples from diseased trees, the student will identify the diseases with 100% accuracy.* Any number of teaching-learning methods might be used in achieving this objective: a field trip to examine diseased trees, presentations with the overhead projector or flip chart, individual or group study, and so on. Some students may learn better through studying written materials. Others may need to see and handle a diseased leaf in order to be able to identify the disease.

While student performance objectives should define the knowledge, skills, and attitudes that **may** be achieved within the program, they also allow for other relevant experiences and variations. Not **all** of your students should be expected to achieve all the objectives specified for your program, course, or unit. Students learn, and achieve objectives, at different rates. This is one of the reasons that proper sequencing of objectives is essential—so that a student, even though he or she has not achieved all the objectives, will still have minimal skills when he/she leaves the program.

Furthermore, some objectives do not have stated outcomes as specific as those we have been discussing. Yet such objectives have a real place in the vocational-technical program. These are called **expressive or experiential objectives.** They describe experiences that would be beneficial for students to participate in, but they do not define expected outcomes. For example, you may specify that your students should have the experience of listening to a series of talks by members of community civic organizations, without specifying what changes in behavior they should exhibit as a result.

In general, however, student performance objectives define the outcomes of the program so that these outcomes can be understood: Understood by students—so that they can determine exactly what is expected of them. Understood by teachers—so that they can identify what outcomes they are responsible for. And understood by employers and vocational administrators—so that they can determine if the program is, in fact, providing the competent human resources needed.

However, in order for student performance objectives to adequately communicate program outcomes, it is essential that the performance be described in such a way that it is **precise** and **measurable.** Certain words commonly used in writing student performance objectives are vague. They are open to several interpretations, depending upon who reads the objective. Such words as *know*, *appreciate*, and *understand* are vague and leave much more room for interpretation than more precise terms such as *define*, *describe*, *repair*, or *analyze*.

For example, assume you were given the following objective: *Upon completion of this course, you will know how to repair a radio.* Would you know what was involved in this activity? You would probably ask yourself questions such as the following:

- Will I have to actually repair the radio or will I only have to describe how it should be done?
- Will I have to locate the malfunction or will someone else identify the defect so that I can repair it?
- What instruments will I be using?
- What kinds of radios will I know how to repair?

As you can see, stating the objectives of an educational program in vague terms leaves too many questions unanswered. If, instead, you were handed the following objective, would you know what was expected?

> *Given a nonfunctioning radio of either transistor or tube construction, and having previously identified the malfunction, you will repair the radio to manufacturer's specifications using the prescribed tools and equipment available in the laboratory.*

Objectives that define the behavior or performance in precise terms (e.g., *You will repair . . .*) are open to less interpretation on the part of the student or teacher. The key to whether the statement is vague or precise is the verb used in the statement. Action-oriented verbs are usually more precise and less open to varying interpretations. Many reference materials on writing objectives provide lists of action-oriented verbs.

Following are some examples:

List	Manipulate	Display
Compare	Weave	Expand
Select	Match	Stamp
Increase	Make	Classify
Identify	Fasten	Analyze
Adjust	Pour	Construct
Repair	Diagram	Differentiate
Paint	Plan	Print

Most well-written student performance objectives not only specify the **action** to be taken, but also the **condition** under which the student will be accomplishing the performance (e.g., *Given a nonfunctioning radio . . .*) and the **criteria** (or standards) that must be met in order to have successfully completed that objective (e.g., *to manufacturer's specifications*). It is essential that you be able to recognize a precise, action-oriented performance statement. The verb will give you the clue.

As you plan your instruction, you will be writing student performance objectives for various lessons and learning experiences. If you can develop a firm rationale for writing and using these objectives, you will find that, once they are written, a major part of your instructional planning has been achieved.

For further information on the rationale for developing student performance objectives, you may wish to read the following supplementary reference: Mager, *Preparing Instructional Objectives*, pp. 1–24.

You may wish to arrange to meet with your resource person and/or peers who are also taking this module. At this meeting you could (1) discuss what you have heard or read about student performance objectives, (2) attempt to generate sample objectives for your service area that are precise and action-oriented, or (3) review existing objectives to determine if they are precise and action-oriented.

The following items check your comprehension of the material in the information sheet, The Need for Precise Student Performance Objectives, pp. 6–8.

SELF-CHECK

I. Characteristics:

Read the following statements and place a check (✓) by each one that accurately describes the characteristics of student performance objectives. If you do **not** check a particular statement, briefly **explain in writing** your reasons for not doing so.

____ 1. Student performance objectives are statements of the general intent of the vocational-technical program.

____ 2. Student performance objectives provide a basis for the evaluation of the student, the lesson, and the program.

____ 3. Student performance objectives outline for teachers how to teach a particular lesson in the program.

____ 4. Student performance objectives describe the scope of the program to students, teachers, employers, administrators, parents, and concerned others.

____ 5. Student performance objectives outline what students must achieve in order to complete the educational program and enter the occupation for which they are preparing.

____ 6. Student performance objectives describe for each student just how they will learn that part of the program.

II. Rationale:

You have been asked by your vocational administrator to attend a meeting in which student performance objectives will be discussed. In talking with several of the new faculty, you have discovered that they do not see the need for writing these objectives. Outline briefly some of the critical points you would make in this meeting in order to indicate to the new faculty why student performance objectives lead to more effective learning.

III. Objectives:

Following is a list of student performance objectives developed by teachers at Center City Vocational-Technical Institute. Some of these objectives are complete, well stated, and precise. In other words, the student would know from the objective exactly what he/she is going to be expected to do. Some of these objectives are inadequate. Place a check (✓) in front of each statement that meets the criteria for a good objective. For any objective that is vague or inadequate, rewrite the objective to make it precise.

____ 1. The student will learn the major parts of the internal combustion engine.

____ 2. You will outline the dietary requirements for an adult female who is moderately active.

____ 3. You will be given a list of terms, and you will know all terms listed.

____ 4. Upon completion of this course, you will be aware of the reasons for having clean copy in offset master production.

____ 5. The student will interpret a blueprint.

____ 6. Upon completion of the course in marketing, you will have developed an appreciation of the many people involved in the process of getting goods and services to the public.

____ 7. You will differentiate among at least three varieties of wheat.

____ 8. The student will develop an interest in a health occupations career.

____ 9. Given a garment pattern that has any of five different seam types, and the necessary equipment, the student will stitch all the seams required in that pattern.

____ 10. The teacher will motivate the student to learn basic metric measurements.

____ 11. After completing the course on basic communication, the student will understand why effective communication is so important.

____ 12. Without aid of references, you will define all terms found in the four automobile manufacturers' guides.

____ 13. The student will analyze a given set of tool specifications to determine their appropriateness for replacing brake shoes.

____ 14. The student will adjust the gap of spark plugs to within .003" of manufacturer's specifications.

____ 15. Given a list of performance statements, you will check (✓) those that are action-oriented (precise).

NOTES

Compare your written responses to the self-check items with the model answers given below. For Part I, you should have checked the same statements as those checked in the model answers, and your written explanations should have covered the same **major** points as the model explanations. For Part II, your rationale should have covered the same **major** points as the model rationale. For Part III, you should have checked the same statements as those checked in the model answers, and your rewritten statements should closely match the model responses.

MODEL ANSWERS

I. Characteristics

___ 1. Student performance objectives are action-oriented statements that describe what the student will be achieving within a given lesson. They are not general in nature; they are very **specific** in outlining student action and measurement of student performance.

✓ 2.

___ 3. Student performance objectives are written in terms of **student performance.** Therefore, the teacher may select the most appropriate activities to assist the student in achieving a particular objective.

✓ 4.

✓ 5.

___ 6. Student performance objectives outline the **outcome** of the learning but do not necessarily identify how that learning will take place. Students often have some options available to them, the choice of which depends on their own learning styles.

II. Rationale

Answers will vary; however, you should have covered the following points:

1. The importance to the students (e.g., student performance objectives outline what is required of them to complete the vocational-technical program)
2. The importance to the teacher (e.g., student performance objectives define what skills, knowledge, and attitudes he/she will be responsible for helping students acquire)
3. The importance to the vocational-technical program (e.g., student performance objectives outline for employers and concerned others what can be expected of graduates and provide the basis for program evaluation)
4. The fact that student performance objectives outline the required outcomes of the program so that students, teachers, and others know what achievements can be expected

III. Objectives

___ 1. *Learn* is an action-oriented word; however, it is not precise. Restated: *The student will name [identify, point out] major parts of the internal combustion engine.*

✓ 2.

___ 3. *Know* is open to interpretation. Are the students simply to memorize the list, or is something more required? Restated: *You will define [match with definitions, describe] terms in a given list.*

___ 4. The term *aware of* does not outline what the student will be doing. Restated: . . . *you will list [explain] the reasons for having clean copy in offset master production.*

✓ 5.

___ 6. What is meant by *appreciation*? An action verb should have been used. Restated: . . . *you will list the people involved in the process of* . . . or . . . *you will trace an item from producer to consumer.*

✓ 7.

___ 8. What does *develop an interest* mean exactly? How could the development of this interest be measured? Restated: *The student will choose one of the five health careers available within the cluster*; or *The student will list seven health careers in which he/she is interested.*

✓ 9.

___ 10. This statement is teacher-oriented, and it is not action-oriented. It should be student-oriented, and it should contain an action verb. Restated: . . . *the student will convert a given list of English measures to metric measures.*

___ 11. *Understand* is one of those terms that leaves much room for interpretation. Restated: *The student will explain why a given piece of communication is effective or ineffective*; or *The student will list [describe] at least three problems that may arise when basic communication breaks down.*

14

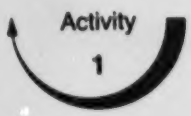
✓ 12.
✓ 13.
✓ 14.
✓ 15.

Level of Performance: For Parts I and III, your checked items should exactly duplicate the model responses. For Parts I and II, your written responses should have covered the same **major** points. For Part III, your rewritten statements should closely match the model responses. If you missed some points or have questions about any additional points you made, review the material in the information sheet, The Need for Precise Student Performance Objectives, pp. 6–8, or check with your resource person if necessary.

Learning Experience II

OVERVIEW

After completing the required reading, analyze and (if necessary) rewrite given student performance objectives.



You will be reading the information sheet, The Components of a Well-Written Student Performance Objective, pp. 16–22.

You may wish to read the following supplementary reference: Mager, *Preparing Instructional Objectives*, pp. 1–60.

You will be analyzing and (if necessary) rewriting given student performance objectives by completing the Analysis Form, pp. 23–25.

You will be evaluating your competency in analyzing and rewriting student performance objectives by comparing your completed Analysis Form with the Model Analysis, pp. 27–28.

You may wish to meet with your resource person and/or peers to review and analyze additional student performance objectives in your occupational specialty.

Activity 1

A good student performance objective may be stated in a single sentence, but it is a rather complex bit of writing, with very structured parts. Read the following information sheet to find out what these parts are, how each must be stated, and how to put all the parts together to form a tight objective that will say precisely what you want it to say.

THE COMPONENTS OF A WELL-WRITTEN STUDENT PERFORMANCE OBJECTIVE

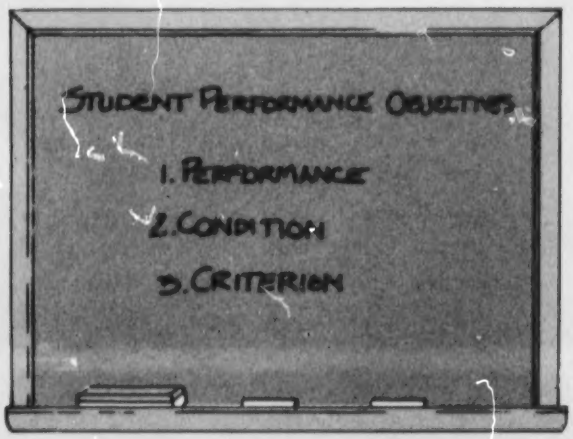
One of the potentially confusing things about writing objectives is that the term *objective* is used in so many different ways. In the educational program, objectives are written for the overall educational **program,** for a specific **course,** for **units** of instruction, and for individual **lessons** or **learning activity packages.**

In addition, the word *objective* is used in program evaluation and program management to describe what the teacher (or worker) should accomplish during a specific period of time.

Some individuals use the term *objective* inappropriately to describe broad program goals or general intents of the educational program. To a certain extent, this variety of usage is understandable in that the word *objective*, by definition, means "an end of action."

Another source of confusion results from the fact that authors, in defining what components need to be included in a well-stated objective, use different terminology for these components.

Throughout this module and in other modules, we use the term *student performance objective.* This term refers to an action-oriented statement describing what is to be achieved by the students in a vocational-technical program.



The form of objective statement described in this module includes three components: performance, condition, and criterion. This form was developed by Mager and is widely accepted. It should be pointed out, however, that some competency-based programs and materials do not include the criterion and/or condition components as part of the objective statement because they have other well-organized ways of dealing with these important components.

Performance Component

The **performance** part of a student performance objective describes what the student will be doing. It must contain an **action verb.** Each of the enabling objectives contained in this module describes the performance to be achieved using an action-oriented verb (underlined below):

- *Demonstrate knowledge of the rationale for developing student performance objectives and the characteristics of properly stated objectives*
- *Analyze and rewrite given student performance objectives*
- *Identify each of the objectives on a given list as being primarily cognitive, psychomotor, or affective*
- *Develop student performance objectives, in each of the learning domains, that contain statements of performance, condition, and criterion*
- *Sequence a given list of student performance objectives*

The terms *action required* and *activity* also have been used to describe this component. In some programs, you will see the term *enablers*, or *enabling objectives*, which indicates that these are objectives that enable, or help, students to reach the ultimate competency desired.

Condition Component

The **condition** part of the objective outlines the circumstances under which the student will be required to perform the activity. This portion of the objective describes (1) what equipment, supplies, or

materials the student will be given to work with; (2) what materials the student will be denied access to; (3) what setting the performance must be demonstrated in; (4) what information the student may be provided that will direct the action in a certain way; and (5) any combination of these conditions.

Sample 1 shows some examples of conditions that might be included within each of these general categories. Stating the condition as *upon completion of the unit* may be convenient, but it probably ignores the actual, specific circumstances under which the student will be performing a particular activity. Hence, such condition statements may be neither accurate nor helpful.

Other words that have been used to decribe this component are *givens* or *context*.

Criterion Component

The **criterion** part of the student performance objective describes the level of mastery or degree of proficiency that must be reached in carrying out the performance. In other words, it describes how well the student must be able to do the job. The criterion tells the student (and teacher) what level of performance is required in order for the objective to be achieved.

This part of the student performance objective is probably the most difficult to write, but once done, it also provides information necessary for planning how to evaluate student performance. There are several ways in which the criterion may be established, including (1) accuracy within a tolerance limit, (2) speed, (3) percentage or number to be achieved, (4) reference to other material that identifies specific criteria, (5) maximum number of permissable errors, (6) degree of excellence, or (7) any combination of these criteria. Sample 2 shows some examples of criteria that might be included within each of these general categories.

As you can see in sample 2, the criterion component may be stated in many ways so long as it specifies a realistic level to be achieved. As in writing conditions, there is a quick way of defining criteria: *with 80% correct*. This is **not** an appropriate criterion in most cases, however. The level of performance required should be based on specific criteria relating to a particular performance under particular conditions, rather than on an arbitrary percentage.

"Aha!" you say. "There are those educators telling us what to do again and not doing it themselves. This module's enabling objectives do not include criterion statements." You are right in that the enabling objectives, as they appear in the overviews, do not define the criteria for achievement.

However, the criteria for each objective are defined in the feedback activity in each learning experience. It is possible to provide the criterion component other than within the performance objective statement itself—if you let students know where they can find the necessary information describing the level that must be achieved.

Until you have gained experience in writing student performance objectives, however, it is suggested that you include the criterion component within the objective statement. Once you are thoroughly competent in writing student performance objectives, you will find that there are many ways that clear and complete objectives can be written without including all components within a single statement.

Other terms that have been used to describe this component are *mastery level* or *standard*.

SAMPLE 1

CONDITION STATEMENTS

GENERAL CATEGORY	EXAMPLES OF CONDITIONS
Equipment, supplies, or materials that the student is given to work with	• Having available all equipment within the electronics laboratory • Given a set of blueprints • Provided access to all references and materials in the DE store • Given a list of performance objectives • Using curriculum guides that provide program content information
Materials to which the student is denied access	• Without aid of references • Using only those materials provided • Having available only that equipment that has been set up
Environment in which the performance must be demonstrated	• In an actual teaching situation • In a simulated classroom or laboratory situation • While in the hospital or nursing home • Using the fully functioning school auto mechanics laboratory
Information that the student may be provided that will direct the action in a certain direction	• Given a written situation involving a family with ethnic eating patterns • Provided two lists—one of terms and another of definitions • Using a case study provided by the teacher • After completing the required reading

SAMPLE 2

CRITERION STATEMENTS

GENERAL CATEGORY	EXAMPLES OF CRITERIA
Accuracy within a tolerance limit	• Within ± .1 degree as compared with the instructor's reading • With a tolerance of ± .001" as measured by a micrometer
Speed	• Completed within five minutes • Ready for return to the customer within 24 hours of drop-off
Percentage or number to be achieved	• With 80% correct responses • All information necessary for a dental history is recorded • At the rate of five per hour
Reference to other material that identifies specific criteria	• As compared to the manufacturer's specifications • Using the evaluation guide, which outlines specific criteria for table setting • According to class handout in communication skills • According to the criteria outlined in the text • According to standard office procedures • Based upon the criteria specified in the assessment instrument
Maximum number of permissible errors	• With no more than two errors • Missing no more than one reading/recording within a two-hour period

Degree of excellence	• So that the shine will reflect a piece of paper • Such that the seam will not split when the two pieces of material are jerked sharply • So that, when the weld is submitted to a stress machine, it will withstand 100 pounds of pressure • All criteria must be achieved at the good or excellent level • With no hair visible in the operating field
Or any combination	• The above criteria can be combined to further define the level of achievement necessary

21

Complete Statements

Each of these three components should be present or otherwise referred to in a well-stated student performance objective. Let's take a look at some student performance objectives and examine these components in more detail. See if you can identify the performance, condition, and criterion components for the following student performance objective:

Given a case situation involving a family with ethnic eating patterns and the necessary meal planning guides, you will plan a balanced diet for that family that will meet basic nutritional standards and take into account the family's eating patterns.

You should have identified the **conditions** as *Given a case situation involving a family with ethnic eating patterns and the necessary meal planning guides*. . . . You should have identified the **performance** as . . . *you will plan* . . . and the **criteria** as . . . *a balanced diet for that family that will meet basic nutritional standards and take into account the family's eating patterns.*

This is a rather involved objective. The conditions include two different items, and the criteria include three different items to consider in determining whether the student has achieved the objective. What about the next objective—can you identify the components?

Upon completion of the unit in basic architectural drafting, you will be able to make working drawings of any of the designs covered in class with 100% accuracy.

This objective contains all the components of a well-stated objective, but does the objective really tell the students under what conditions they will be performing? And what does the 100% mean? It really isn't enough to write student performance objectives that contain all of the necessary components if they are misleading for the teacher or student.

Probably, the student would be given specifications to work from, along with the necessary drafting tools and material. The criteria for acceptable performance should outline the specific characteristics the finished drawings must have or refer the student to an established set of criteria. A more realistic objective might be stated as follows:

Given a set of building specifications for any of the basic designs covered in class, you will make a set of working drawings of that building using any materials/supplies needed so that the drawings contain all the characteristics outlined in the evaluation sheet.

This is a realistic objective, even if it does not specifically outline the criteria to be used in judging the finished drawings. Since this objective would probably be completed toward the end of the unit, it might not be efficient to list all the criteria to be considered. You would, however, need to provide the students with access to or copies of the evaluation sheet that outlines the specific criteria to be met by the completed drawings.

Level of Specificity Required

The level of specificity required of good student performance objectives depends, in part, on the level for which they are being written. One of the criticisms of student performance objectives has been that they are often too specific. In many cases, objectives written for **lesson** plans or **learning activity packages** are very specific because they cover only a small part of the educational program. However, objectives written for **units** or **courses** are usually much broader in scope, covering a wider range within the educational program. Sample 3 shows an example of a sequence of student performance objectives that might be developed for an operating-room technician program.

As you can see in sample 3, each of these student performance objectives contains the necessary components of a well-stated objective, but there is quite a difference in the scope that each objective covers. As you develop your instructional plans, you will be writing student performance objectives. Depending on the scope of each plan, you will need to judge how specific the objective must be to be appropriate.

No matter when the objective is to be achieved, however, it must contain statements of the performance to be achieved, the conditions under which the student will be working, and the level that must be achieved in order to satisfactorily accomplish that objective.

SAMPLE 3

LEVELS OF OBJECTIVES

General Program Objective	Upon completion of the operating-room technician program, the student will be able to function in a single scrubbed capacity for any of the routine surgical procedures.
Course Objective	Upon completion of the general surgical procedures course, the student will be able to function as first scrub in any routine abdominal or peritoneal cases. Evaluation will be done by the supervisory nurse, using clinical evaluation forms.
Unit Objective	Assigned any of the routine abdominal cases in the operating room, you will prepare suture, needles, and other supplies for that case and doctor using preference cards. The instructor will check your selection against the cards and procedures.
Lesson Objective	After completing the required reading, you will list differences between first and second scrub responsibilities. Your list will be compared with the list outlined in class. OR Given the necessary equipment and supplies for major surgery, you will set up the backtable for the procedure according to clinical procedure and without contamination.

If you have some questions about the component parts of a well-stated student performance objective, you may wish to read the supplementary reference, Mager, *Preparing Instructional Objectives*, pp. 1–60. This reference provides some exercises for you to complete to help you recognize and develop well-stated objectives.

The following activity checks your ability to identify the components of a well-stated student performance objective. The list below contains statements that may or may not contain all the components of well-stated student performance objectives. Examine each statement and (1) circle the performance, (2) underline the condition with one line, (3) underline the criterion with two lines, and (4) rewrite any objective that does not contain all three components or that contains a component that is vague, inappropriate, or unrealistic, and briefly explain why you rewrote the objective.

ANALYSIS FORM

1. You will grease all critical points, as outlined by the manufacturer, on any automobile coming into the laboratory requiring routine maintenance.

2. Given sample résumés, you will learn how to write one of your own.

3. The student will stitch heavy material garments in such a way that they will pass simulated inspection guidelines.

4. Given a series of Ohm's law problems that outline any two of the values for current, voltage, or resistance, you will calculate the missing value with 100% accuracy on at least 80% of the problems.

5. Using the form provided, you will critique a sales presentation within a half hour.

6. Given examples of completed auto repair forms, you will price the work using any of the price lists available in the shop.

7. The student will outline optimum storage requirements for any of the foods in a given list.

8. In an actual teaching situation, write student performance objectives for a lesson. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form.

9. Given ten thermometers registering different temperatures, you will read each thermometer with 100% accuracy.

10. You will prepare a soil mixture for potting plants that contains the recommended amounts of each ingredient; the size of the particles should be no more than ⅛" in diameter.

NOTES

Compare your written responses on the analysis form with the model analysis given below. Your analysis of the performance objectives—performance, conditions, and criteria—should exactly match the model responses. Your rewritten objectives should contain all three components, precisely stated as suggested in the model objectives. Your explanations need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL ANALYSIS

1. **Performance:** you will grease [car parts]
   Condition: on any automobile coming into the laboratory requiring routine maintenance
   Criterion: all critical points, as outlined by the manufacturer

2. **Performance:** you will learn how to write [a résumé] of your own
   Condition: given sample résumés
   This objective does not contain either a precise statement of performance (*learn how* is vague) or a criterion. It could be written as follows:
   Given sample résumés, you will develop a résumé of your own that contains all essential elements as identified in the samples.

3. **Performance:** the student will stitch heavy material garments
   Criterion: in such a way that they will pass simulated inspection guidelines
   This objective does not contain the conditions under which the student will be performing. It could be rewritten as follows:
   Given cut pieces of heavy material garments and the necessary patterns, the student will stitch any of the heavy material garments in such a way that they will pass simulated inspection guidelines.

4. **Performance:** you will calculate the missing value of the [Ohm's law] problems
   Condition: given a series of Ohm's law problems that outline any two of the values for current, voltage, or resistance
   Criterion: 100% accuracy on at least 80% of the problems

5. **Performance:** you will critique a sales presentation
   Condition: using the form provided
   Criterion: within a half hour
   This objective does not contain a precise statement of the conditions under which students will be performing. They are told they will be given a form to use, but not whether they will be critiquing a live sales presentation, videotaped presentation, or simulated classroom presentation. In addition, the criterion as stated (*within a half hour*) is not really appropriate. The speed with which the critique is done is surely not as important as the accuracy of the critique. The objective could be rewritten as follows:
   After viewing a videotaped sales presentation, you will critique the presentation, using the critique form provided. Your critique must match the model critique.

6. **Performance:** you will price the [auto repair] work
   Condition: given examples of completed auto repair forms; using any of the price lists available in the shop
   This objective does not contain a criterion. How accurately must the work be priced? This objective could be rewritten as follows:
   Given examples of completed auto repair forms, you will price the work, using any of the price lists available in the shop, with no more than $1.00 error in ten tabulations.

7. **Performance:** the student will outline storage requirements
   Condition: for any of the foods in a given list
   Criterion: optimum
   If the *optimum* requirements have been defined previously and the students know where this information is to be found (e.g., handout, reference material), then this objective is complete. The specific guidelines (criteria) could have been mentioned in the objective, however.

8. **Performance:** write student performance objectives for a lesson
   Condition: in an actual teaching situation
   Criterion: your performance will be assessed by your resource person, using the Teacher Performance Assessment Form

9. **Performance:** you will read each thermometer
   Condition: given ten thermometers registering different temperatures
   Criterion: 100% accuracy
   This objective is complete. However, you may have questioned the appropriateness of the criterion (*with 100% accuracy*). Allowing a variance of ± .1 degree might be more realistic.

10. **Performance:** you will prepare a soil mixture for potting plants
    Criterion: the mixture must contain the recommended amounts of each ingredient; the size of the particles should be no more than ⅛" in diameter
    This objective does not contain a statement of the conditions under which students will be working. What will they be given to work with? This objective could be rewritten as follows:

    Using the soil (materials) available in the horticulture room, you will prepare a soil mixture for potting plants that contains the recommended amounts of each ingredient; the size of the particles should be no more than ⅛" in diameter.

Level of Performance: Your analysis of the objectives should have exactly duplicated the model responses. Your rewritten objectives should contain all three components and be precisely stated. Your explanations should cover the same **major** points as the model objectives. If you missed some points or have questions about any additional points you made, review the material in the information sheet, The Components of a Well-Written Student Performance Objective, pp. 16–22, or check with your resource person if necessary.

You may wish to meet with your resource person and/or other peers taking this module to (1) review a list of student performance objectives in your occupational specialty and (2) use the keying symbols from the Analysis Form, pp. 23-25, to analyze those objectives. Your resource person may provide you with a list of objectives, or most curriculum guides in your occupational specialty will contain objectives you can use.

Learning Experience III

OVERVIEW

After completing the required reading, identify each of the objectives on a given list as being primarily cognitive, psychomotor, or affective.

You will be reading the information sheet, Performance Objective Domains, pp. 31–37.

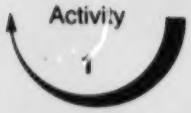
You may wish to review one or both of the following supplementary references: Bloom, *Taxonomy of Educational Objectives: Handbook I: Cognitive Domain*; and/or Krathwohl, *Taxonomy of Educational Objectives: Handbook II: Affective Domain.*

You may wish to meet with your resource person and/or peers to discuss the readings or to further clarify which competencies in your service area would be included in each of the domains.

You will be identifying student performance objectives as being cognitive, psychomotor, or affective by completing the Domain Identification Form, pp. 39–40.

You will be evaluating your competency in identifying the domain in which each of the student performance objectives belongs by comparing your completed Domain Identification Form with the Model Answers, p. 41.

You may wish to try to identify the general taxonomic **level** of each objective on the Domain Identification Form, pp. 39–40.



Not all student performance objectives are alike. As a teacher, you not only will want your students to be able to perform certain skills but also will be concerned about the knowledge they possess and the attitudes they have about themselves, their co-workers, and their jobs. Read the following information sheet to learn how to recognize and write objectives that deal with these areas of your teaching.

PERFORMANCE OBJECTIVE DOMAINS

Another dimension of writing student performance objectives relates to the different types of performances that can be specified. Just as your own behavior patterns are made up of different types of activities, so are the objectives that must be achieved in order for the student to leave a program and go into the occupation for which he/she is being prepared.

These activities include knowing certain information (classified as the cognitive domain), performing certain physical activities (classified as the psychomotor domain), and exhibiting certain personal qualities or attitudes (classified as the affective domain).

As a vocational-technical teacher, you will need to be able to develop objectives that emphasize the cognitive, psychomotor, and affective domains. Each of these domains has certain characteristics. Let's take a detailed look at each domain and at some of the performances, conditions, and criteria that might be appropriate for each.

Cognitive Domain

The **cognitive domain** includes those performances that require knowledge of specific information; e.g., the principles, concepts, and generalizations necessary for problem solving. The following are examples of cognitive performances:

- *Define the terms*
- *Critique the presentations*
- *Develop your own résumé*
- *Identify given objectives as being primarily cognitive, psychomotor, or affective*

Conditions (circumstances under which such performances would be accomplished) could be any situation in which the student is given information to process, such as the following:

- *Given a list of terms*
- *After viewing videotaped lesson presentations*
- *Given sample résumés*
- *Given a list of student performance objectives*

Criteria within the cognitive domain will usually call for accuracy of the information to a certain standard or will make reference to other material. These could include such statements as the following:

- *With 80% correct responses*
- *According to criteria contained in the text*
- *Compared to a model*

Psychomotor Domain

The **psychomotor domain** measures the skill performance of the student and, therefore, the performance required will involve the manipulation of objects, tools, supplies, or equipment. Performances that are primarily psychomotor include the following:

- *Type a letter*
- *Construct a wall*
- *Wire a plug*
- *Develop an X ray*
- *Plow a field*
- *Use an adding machine*
- *Make a buttonhole*
- *Color hair*

Since students will be manipulating something such as tools, equipment, supplies, or machinery, the conditions for the psychomotor objective will need to describe the necessary materials or environment such as the following:

- *In a simulated office situation*
- *Given necessary blueprints and construction materials drawn from the storeroom*
- *For any nonfunctioning radio brought into the shop*
- *Following film exposure*
- *For any field with no more than 5° slope*

Similarly, the criterion for the achievement of a psychomotor objective will relate (1) to the actual **performance** or the finished **product** and (2) to the necessary level of performance that must be achieved. Appropriate criteria for objectives in the psychomotor domain might involve accuracy within a certain tolerance limit, speed, degree of excellence, or reference to other material outlining the criteria for judgment. Examples of such criteria might include the following:

- *At 50 words per minute, with no more than two errors*
- *So that the wall meets criteria specified within the blueprint and will pass inspection by the instructor using the Wall Construction Criteria Checklist*
- *According to manufacturer's specifications*
- *To a .001" tolerance, as measured by a micrometer*
- *According to the procedure outlined*
- *So that the shine will reflect a piece of paper*

Affective Domain

In the **affective domain,** the performance required involves the demonstration of feelings, attitudes, or sensitivities toward other people, ideas, or things. For example, the student might be asked to do the following:

- *Demonstrate an increased awareness*
- *Show concern for safety within the laboratory*
- *Display a concerned attitude toward frightened patients*
- *Take more responsibility for his/her learning*

The conditions under which these feelings or attitudes can be demonstrated might include the following:

- *Upon completion of the unit on personnel relations*
- *At all times within the laboratory*
- *In the actual work situation*

In the affective domain, since feelings are not directly measurable, the criteria by which achievement of an objective are measured relate to **behavior** that demonstrates that a feeling or attitude is present. Therefore, both the criteria and the performance statement will usually contain an action word or verb. Examples of such criteria are as follows:

- *Stays with an apprehensive patient during examination or sees that someone else will be present*
- *Reports a hazardous condition in the laboratory*
- *Participates in class discussion voluntarily or takes on an individual project without being asked*

You may have heard that objectives within the affective domain are difficult to write because feelings and attitudes are not easy to measure. One of the reasons that objectives in the affective domain are not easy to measure is that students can falsify or fake the desired behavior. If they know, for example, that an objective states that they should have a cooperative attitude toward other students, they can pretend to do this when you are nearby and change their behavior, perhaps dramatically, when you are not around to observe.

Another potential problem with measuring the achievement of affective objectives is that people show feelings and attitudes in many different ways. Think of a point in your life during which you were upset about something. Did all of your friends and acquaintances react to your unsettled condition in the same way? Probably some asked you outright what was wrong. Others may not have asked, but they made themselves available to you when you were ready to talk about the problem. Still others may have indicated to you in other ways that they realized you were upset but would wait for you to take the initiative in making your feelings known.

Similarly, we do not expect all students to exhibit the same behavior in demonstrating the necessary attitudes for an occupation. Rather, you need to be more concerned that all students can function appropriately, based on their own individuality, in the actual work situation. As you begin to write affective objectives ask yourself the following two questions:

- Are these feelings or attitudes that are really required at entry level by the industry for which I am preparing my students?
- If I were watching someone who possessed this feeling or attitude, what type of behavior might I expect him/her to exhibit?

In some cases, the answer to the first question may be that you are making unrealistic demands in terms of actual entry-level requirements.

In answering the second question, think about the behavior patterns you might expect in a particular situation; e.g., how does an individual who respects his/her co-workers behave in the work situation? Then, provide a variety of options for students to demonstrate, in their own way, that they have the necessary attitudes and feelings to exhibit the desired behavior.

Selecting the Domain

It should be noted that few objectives are purely cognitive or psychomotor or affective. The major criterion in determining the domain in which an objective belongs is the **primary** performance called for. If it relates primarily to **knowing** about the subject, it is cognitive. If it relates primarily to **skill** development, it is psychomotor. And if it relates primarily to **feelings/attitudes,** it is affective.

Taxonomic Levels

Within each of the domains—cognitive, psychomotor, and affective—there are levels of performance that move from very simple performances to the more complex. These levels, taken as a whole, are termed a *taxonomy*, or classification system.

The taxonomy in the cognitive domain moves from the lowest level of knowledge (that of simple remembering or recall) to the more complicated thinking processes required for evaluation. Sample 4 shows the differing levels within the cognitive domain. As you will note, each of the higher levels within the chart requires that the lower levels be met first in order for the higher level to be accomplished. In other words, in order to reach the application level (i.e., to apply knowledge), the student must first possess the basic knowledge and also comprehend it.

Similarly, the levels within the psychomotor domain progress from simple skills to complex skill development in which several tasks are integrated into a coordinated whole. In the taxonomy (see sample 5), the more complex motor skill is developed through stages—from the imitation of a model to the point at which performance of the skill becomes automatic or habitual. As you can see in the sample, each successive level within the domain requires more complicated forms of psychomotor skills and/or a combination of several skills into a coordinated sequence.

SAMPLE 4

MAJOR CATEGORIES IN THE COGNITIVE DOMAIN

Evaluation
involves acts of decision-making, judging, or selecting based on criteria and rationale

requires synthesis in order to evaluate

Synthesis
combines elements to form new entity from original one

requires analysis in order to synthesize

Analysis
separates whole into its parts, until relationship among elements is clear

requires ability to apply information in order to analyze

Application
uses information in a situation different from original learning context

requires comprehension of information in order to apply in new situation

Comprehension
interprets, translates, summarizes, or paraphrases given information

requires knowledge in order to demonstrate comprehension

Knowledge
recognition and recall of facts and specifics

SOURCE: Benjamin S. Bloom, ed., *Taxonomy of Educational Objectives: Handbook I: Cognitive Domain* (New York, NY: David McKay Company, Inc., 1956). Reprinted by permission of David McKay Company, Inc.

SAMPLE 5

MAJOR CATEGORIES IN THE PSYCHOMOTOR DOMAIN

Naturalization
completes one or more skills with ease and becomes automatic with limited physical or mental exertion

Articulation
combines more than one skill in sequence with harmony and consistency

Precision
reproduces a skill with accuracy, proportion, and exactness; usually performed independent of original source

Manipulation
performs skill according to instruction rather than observation

Imitation
observes skill and attempts to repeat it

SOURCE: R. H. Dave, as reported in Robert J. Armstrong *et al.*, *Developing and Writing Behavioral Objectives* (Tucson, AZ: Educational Innovators Press, 1970).

The affective domain also includes levels. However, instead of the development from simple to complex found in the cognitive and psychomotor domains, each succeeding level in the affective domain involves more internalization of the feeling or attitude. In other words, the behavior becomes a part of a person's total way of responding.

In the lower levels of the affective domain, a student is simply provided with the necessary information with which to know what an appropriate response is, and is only required to passively attend to (be aware of) that information. The highest level within the affective domain is achieved when the student or worker has internalized the information. Sample 6 outlines the development within the affective domain.

The taxonomies within the cognitive, psychomotor, and affective domains provide a method by which you can organize or sequence your instructional objectives. By identifying the domain in which the objective belongs and the taxonomic level of the objective, it is possible to develop instruction in such a way that lower-level objectives within each of the domains are achieved before the student progresses to higher-level ones. In most cases, the higher-level objectives will be reached toward the end of a particular unit or toward the end of the program.

One word of caution—it may not be possible or desirable within the time frame of your program to develop all cognitive, psychomotor, or affective objectives through the highest level of each domain. For example, some of the very early motor skills may be developed to a naturalization level (done automatically and with ease), but it would not be possible or even realistic to expect all skills to be developed to this level. Similarly, in the affective domain it may not be possible to proceed beyond the valuing level because of the time limits of the program. Furthermore, it may not be appropriate to expect students to develop certain feelings or attitudes beyond valuing them appropriately in the work situation.

In all cases, the key concerning what level is necessary within your program is the level required by the industry for which you are preparing students. You may only be able to prepare your students to respond in the appropriate manner. The industry would then take over so that, over a much longer period of time, the behavior becomes a consistent and internalized response. This is one of the reasons that developing objectives is a time-consuming task. Not only do you have to be able to write the objectives, but you must ask yourself whether these objectives are appropriate for the level of the program offered and for the students entering it.

In order to define the program so that the student will be able to leave the program and enter the occupation for which he/she is preparing, objectives should be written in all domains. Knowledge of information is necessary; therefore, cognitive objectives must be written. Skill is important; therefore, psychomotor objectives must be written. And, attitudes and feelings are important; therefore, affective objectives must be written. Of course, most objectives will contain or imply elements of two or all three of the domains.

SAMPLE 6

MAJOR CATEGORIES IN THE AFFECTIVE DOMAIN

Characterizing
total behavior is consistent with values internalized

Organizing
committed to set of values as displayed by behavior

Valuing
displays behavior consistent with single belief or attitude in situations where he/she is not forced to comply or obey

Responding
complies to given expectations by attending or reacting to stimuli or phenomena; i.e., interests

Receiving
aware of; passively attending to certain phenomena and stimuli; i.e., listening

---

SOURCE: David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, *Taxonomy of Educational Objectives: Handbook II: Affective Domain* (New York, NY: David McKay Company, Inc., 1964). Reprinted by permission of David McKay Company, Inc.

For futher information on the cognitive and affective domains and the levels within each domain, you may wish to review Bloom, *Taxonomy of Educational Objectives: Handbook I: Cognitive Domain*; and/or Krathwohl, *Taxonomy of Educational Objectives: Handbook II: Affective Domain.*

You may wish to meet with your resource person or with peers who are also taking this module to discuss the different domains. You could discuss specific competencies from your own service area that would fit each domain. Or, you could review objectives in curriculum guides and attempt to categorize them by domain and by taxonomic level.

The following activity checks your comprehension of the material in the information sheet, Performance Objective Domains, pp. 31–37. Each of the following objectives is primarily cognitive (C), psychomotor (P), or affective (A). Read each student performance objective, and indicate its primary domain by placing the appropriate letter (C, P, or A) in the blank to the left of the item.

DOMAIN IDENTIFICATION FORM

___ 1. Following a demonstration of techniques for stitching heavy materials, you will stitch given materials so that they will pass simulated inspection guidelines.

___ 2. Given samples of various legume seeds, you will identify each by name with 100% accuracy.

___ 3. Upon completion of the section on alternatives in business careers, the students will have increased their awareness of options available to them, as demonstrated by their being able to identify 50% more of the opportunities on the posttest than on the pretest.

___ 4. You will define the editing symbols on a given list with 90% accuracy.

___ 5. On the assigned hospital ward, you will transfer doctors' orders to the appropriate forms for those orders. All forms must receive a "satisfactory" rating on the critical points outlined on the clinical evaluation form.

___ 6. Given ten lists of from 4 to 15 three-digit numbers, you will calculate totals for the lists on any of the four makes of adding machines found in the simulated office practice laboratory.

___ 7. You will specify any missing or incomplete information on the five completed short-term loan contracts provided with 30% accuracy.

___ 8. In the clinical setting, you will demonstrate concern for apprehensive patients by—

- answering call lights promptly,
- staying with an apprehensive patient or seeing that someone will be present,
- talking with the patient about the apprehension and answering questions about the unknown, and
- explaining all procedures before using them with patients.

___ 9. Given a series of Ohm's law problems that contain any two of the values for current, voltage, or resistance, you will calculate the missing value with 100% accuracy on at least 80% of the problems.

___ 10. Provided the necessary soil test data and necessary crop information, you will determine the kinds of nutrients to be applied to the soil to grow a crop.

___ 11. Using a soil survey report, determine the quantities of nutrients needed and outline the rationale for your decision using previous crop and test information.

___ 12. The student, when confronted with a safety hazard, will demonstrate concern for safety practices by—

- pointing out safety hazards to others,
- turning off all machinery when it is not being used by self or others, and
- observing all caution signs.

___ 13. Given ten shafts with differing measurements, you will measure the diameter of each with a micrometer within ± .001" of the instructor's measurement.

___ 14. You will compose a résumé that outlines your qualifications for a given job and contains all the components identified in the lesson on writing résumés.

___ 15. You will change any cash register tape within two minutes so that the register is ready for tabulation.

___ 16. When confronted with a situation requiring the clarification of instruction, you will ask for clarification before proceeding.

___ 17. Given a written situation involving the adaptation of basic procedures, you will outline the method you would use to accomplish the task within the restrictions established.

___ 18. After viewing a videotaped sales presentation, you will critique the presentation, using the outline form provided. Your critique must match the model on all critical points identified.

___ 19. You will grease all critical points, as outlined by the manufacturer, on any car coming into the auto mechanics laboratory requiring routine maintenance.

___ 20. You will identify the objectives on a given list as primarily cognitive, psychomotor, or affective.

Compare your written responses on the domain identification form with the model answers given below. Your responses should exactly duplicate the model responses.

MODEL ANSWERS

1. Psychomotor
2. Cognitive
3. Affective
4. Cognitive
5. Cognitive
6. Psychomotor
7. Cognitive
8. Affective
9. Cognitive
10. Cognitive
11. Cognitive
12. Affective
13. Psychomotor
14. Cognitive
15. Psychomotor
16. Affective
17. Cognitive
18. Cognitive
19. Psychomotor
20. Cognitive

Level of Performance: Your written responses on the domain identification form should have matched the model answers exactly. If you missed an item, review the material in the information sheet, Performance Objective Domains, pp. 31–37, or check with your resource person if necessary.

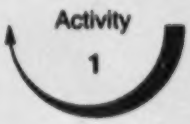
You may wish to go through the list of objectives again, identifying the general taxonomic **level** of each objective. Refer to samples 4, 5, and 6, or to the supplementary readings listed in this learning experience if you need help. If you still have questions about the level of an objective, check with your resource person.

NOTES

Learning Experience IV

OVERVIEW

Using resources that provide vocational-technical program content information, develop student performance objectives, in each of the learning domains, that contain statements of performance, condition, and criterion.



You will be selecting resources in your occupational specialty that provide program content information for all types of behaviors: cognitive, psychomotor, and affective.

You will be writing well-stated student performance objectives in each of the domains for the content you select.

Your competency in developing well-stated student performance objectives in each of the learning domains will be evaluated by your resource person, using the Objectives Checklist, pp. 45–46.

Select resources in your occupational specialty that will provide vocational-technical program content information for knowledge, skill, and attitude types of competencies. Resources could include curriculum guides, courses of study, textbooks, occupational analyses, or competency profiles. The resources you select should cover all domains. If you need assistance in finding resources, contact your resource person.

For the content you selected, write student performance objectives in the cognitive, psychomotor, and affective domains. Write at least ten cognitive, five psychomotor, and five affective objectives, numbering each objective for easy reference during feedback. Be sure that (1) each objective contains statements of performance, condition, and criterion, (2) the performance is stated precisely, and (3) the condition and criterion are realistic. When writing the cognitive objectives, include at least three objectives that call for more than mere recall.

After you have developed your student performance objectives, arrange to have your resource person review and evaluate your objectives. Give him/her the Objectives Checklist, pp. 45–46, to use in evaluating your work.

OBJECTIVES CHECKLIST

Directions: Place an X in the YES or NO box to indicate whether all objectives met or did not meet each applicable criterion. For any objective that does not meet a criterion, specify the number of the objective in the space provided for comments.

Name _____

Date _____

Resource Person _____

	Yes	No	Comments
The cognitive objectives meet the following criteria:			
1. The performance is specified	☐	☐	
2. The performance is stated in action-oriented terms	☐	☐	
3. The primary performance called for relates to the demonstration of knowledge	☐	☐	
4. The condition is specified	☐	☐	
5. The condition is realistic	☐	☐	
6. The criterion is specified	☐	☐	
7. The criterion is realistic	☐	☐	
8. At least three objectives call for more than mere recall	☐	☐	
The psychomotor objectives meet the following criteria:			
9. The performance is specified	☐	☐	
10. The performance is stated in action-oriented terms	☐	☐	
11. The primary performance called for relates to the demonstration of skill	☐	☐	
12. The condition is specified	☐	☐	
13. The condition is realistic	☐	☐	
14. The criterion is specified	☐	☐	
15. The criterion is realistic	☐	☐	
The affective objectives meet the following criteria:			
16. The performance is specified	☐	☐	
17. The performance is stated in action-oriented terms	☐	☐	
18. The primary performance called for relates to demonstration of attitudes/feelings	☐	☐	
19. The condition is specified	☐	☐	
20. The condition is realistic	☐	☐	

	Yes	No	Comments
21. The criterion is specified	☐	☐	_____
22. The criterion is realistic	☐	☐	_____
23. The feelings/attitudes called for are realistic in terms of entry-level requirements of the industry	☐	☐	_____

Level of Performance: All items must receive YES responses. If any item receives a NO response, review the readings in previous learning experiences, revise the objectives accordingly, or check with your resource person if necessary.

Learning Experience V

OVERVIEW

After completing the required reading, sequence a given list of student performance objectives.

You will be reading the information sheet, Sequencing Student Performance Objectives, pp. 48–49.

You will be logically sequencing the Student Performance Objectives: "Getting a Job," p. 50.

You will be evaluating your competency in sequencing the student performance objectives by comparing your sequence with the Model Sequences, p. 51.

Activity 1

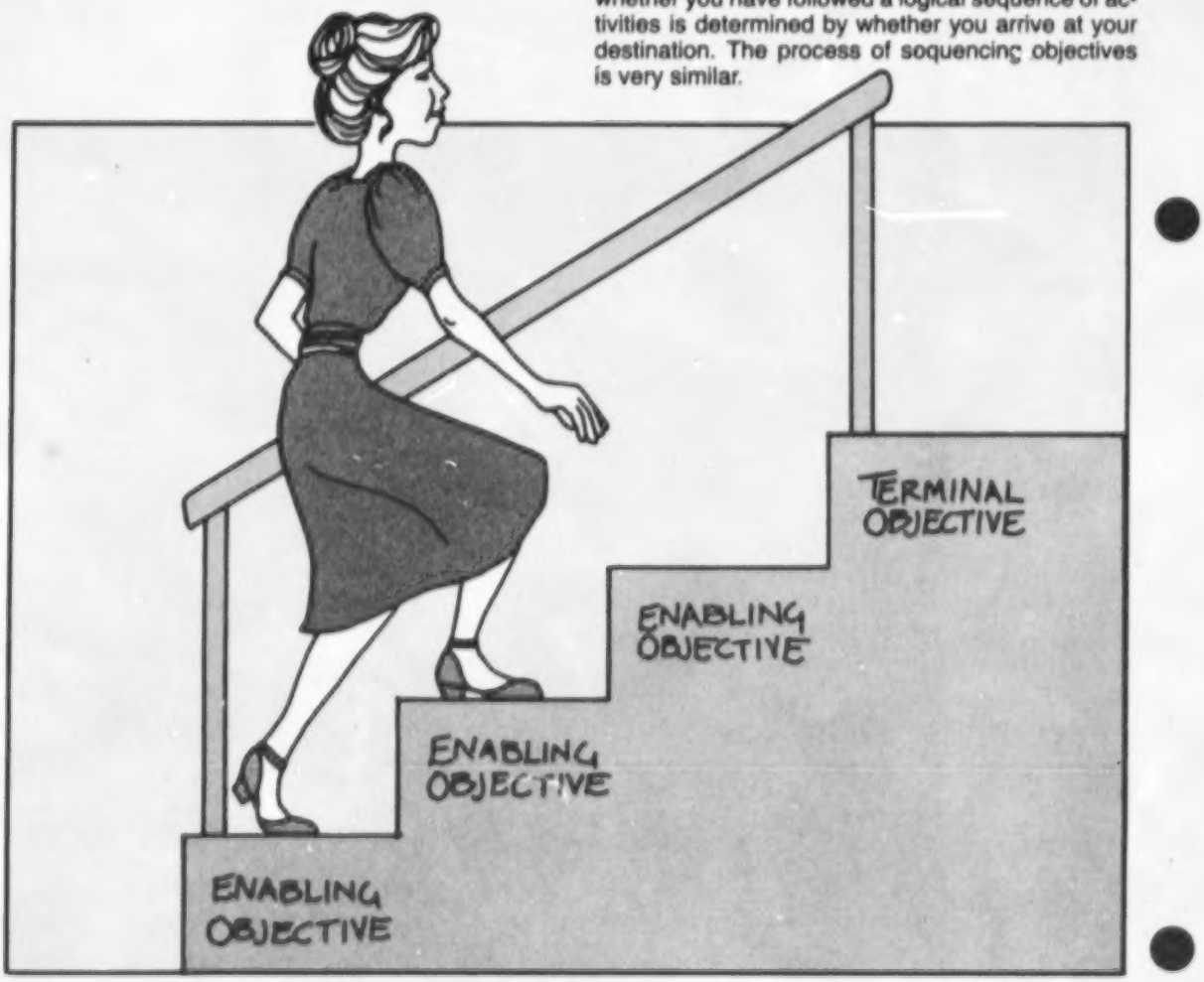
When you have a set of fine, new student performance objectives all written, can you let your students work on them in just any order they wish? The following information sheet says no and tells you how you can arrange the sequence of the objectives to speed learning and maintain student interest. Read this information sheet to find out what to do.

SEQUENCING STUDENT PERFORMANCE OBJECTIVES

The process of sequencing student performance objectives can be compared to the procedures you use in driving your car. There are certain things you must do before others. For example, you must (1) get into the car, (2) put the key in the ignition, and (3) start the car before you can (4) move.

There are other activities that you may not necessarily have to complete in an exact sequence, but that must be performed before you can do something else. For example, in some cars you have to fasten your seat belt before the starter will operate.

There are still other activities that can be accomplished in any order. For example, you probably have a wide choice of roads that you can take to get to any one given destination. Ultimately, the test of whether you have followed a logical sequence of activities is determined by whether you arrive at your destination. The process of soquencing objectives is very similar.



Sequencing objectives provides your students with a logical order to follow in completing the activities that will develop the necessary knowledge, skills, and attitudes. The ultimate goal is entry into the occupation for which they are preparing. To reach that goal, certain objectives must be accomplished before others.

The major consideration when sequencing objectives is that there is a logical development of skills, attitudes, and knowledge such that prerequisite objectives are achieved before the culminating ones. Such is the case with the enabling objectives for this module. You must achieve them before you are likely to have the necessary knowledge and skill to meet the terminal objective.

The sequence chosen for this module assumes that the student needs general information about student performance objectives (the rationale for writing them, how to differentiate between precise and vague objectives) before the other activities will be effective. Second, the student needs experience (practice) in analyzing simple objectives to determine if each contains statements of performance, condition, and criterion—without being concerned about the more complex task of dealing with objectives in the three different domains.

Once able to recognize objectives that contain all components, the student can be given information about and practice in writing well-stated objectives in each of the domains. The sequencing of student performance objectives logically follows the task of having written them, and all these experiences culminate in performance in an actual school situation. Thus, the enabling objectives in this module are sequenced as follows:

1. Demonstrate knowledge of the rationale for developing student performance objectives and the characteristics of properly stated objectives
2. Identify the performance, condition, and criterion components for given student performance objectives, and rewrite the objectives if necessary
3. Indicate whether given objectives are primarily cognitive, psychomotor, or affective
4. Write student performance objectives within each domain
5. Sequence objectives

If the enabling objectives had been sequenced as follows, can you tell what the rationale would have been?

1. Identify the performance, condition, and criterion components of given student performance objectives
2. Indicate whether given objectives are primarily cognitive, psychomotor, or affective
3. Write student performance objectives
4. Write student performance objectives within each domain
5. Sequence objectives
6. Develop a rationale for and differentiate between vague and precise objectives

This is also a logical sequence—one that moves from the specific (parts of an objective, how to write one) to the general (why write objectives, why be precise). Both sequences assume that (1) the student needs knowledge about the components and domains of student performance objectives before he/she can practice writing them and (2) practice should precede performance in the real world.

You may decide that your students need to achieve an objective that will catch their interest very early in the program. You could then sequence the objectives to achieve this. For example, you might sequence baking objectives before other food preparation objectives, on the assumption that many people like sweets and pastries better than vegetables.

Or, you may decide that students need some overview of the total subject before you can proceed to specifics. Therefore, your first objective might cover a very broad area.

Or, you may decide that your students need very early success within the program. Thus, you would sequence some easily achieved and interesting objectives first, before moving on to more difficult ones. In all cases, the assumption is that a certain sequence of student performance objectives (e.g., simple to complex, known to unknown) makes sense in terms of students' needs and abilities.

The following student performance objectives relate to a unit on getting a job. Logically sequence the objectives and be prepared to explain why you sequenced the objectives as you did.

STUDENT PERFORMANCE OBJECTIVES: "GETTING A JOB"

The student will—

1. explain to a prospective employer in a mock interview why he/she is qualified for the position. The interviewer and the teacher will evaluate the student's response, using the Interview Rating Checksheet.
2. fill out a job application form completely, accurately, and neatly as judged by a teacher and a representative of the business and/or industrial community.
3. ask questions about benefits and opportunity for advancement and training in a mock interview situation. Evaluation will be made on the basis of peer and teacher feedback on the Interview Rating Checksheet.
4. dress and groom him/herself for the job interview to meet acceptable standards developed by a peer, the teacher, and a representative of the business and/or industrial community.
5. develop a résumé, to be used for a job application, that contains all necessary information as outlined in sample résumés.
6. write a letter accepting or not accepting a position. The letter will be evaluated by the teacher using guidelines outlined in class.
7. conduct him/herself with poise (including manners and posture) in a mock interview situation. The student's poise will be evaluated by a panel of his/her peers.
8. write a letter of job application that meets minimum standards according to the criteria listed on the Application Letter Checksheet.

Compare your completed sequence with the model sequences explained below. Your sequence need not exactly duplicate one of the model sequences; however, you should be able to justify any differences.

MODEL SEQUENCES

These objectives could be sequenced in several ways in view of the fact that we do not have data on the interests or abilities of the students taking the unit. Thus, we must look for a logical pattern in the objectives themselves. The objectives all seem to be at about the same level of difficulty or complexity, and they do not divide into general and specific objectives.

They do divide, however, into (1) objectives concerning the "paperwork" aspects of getting a job, and (2) objectives concerning behavior during an interview. It would be logical to have students begin by developing their own résumés, since they need to have a firm fix on their qualifications for employment before they can accomplish most of the other objectives. They could then work on the other paperwork-objectives in any order, though a chronological sequence might make sense.

None of the interview-objectives **must** be accomplished before any of the others—but they would no doubt occur in the same order as they would in an actual interview. The objective concerning poise would be accomplished **simultaneously** with the other interview-objectives.

Thus, you would have a paperwork sequence (5–2–8–6, or 5–8–2–6) and a behavior sequence (4–1–3, with 7 being accomplished simultaneously with 1 and 3).

The objectives could, of course, be sequenced in a strictly chronological way, as illustrated below:

(5) Develop a résumé
(2) Fill out a job application form
(8) Write a letter of job application
(4) Dress and groom for a job interview
(1) Explain qualifications in a mock job interview and (7) conduct self with poise
(3) Ask questions in a mock job interview and (7) conduct self with poise
(6) Write acceptance or nonacceptance letter

Level of Performance: Your completed sequence need not have matched one of the models exactly; however, you should be able to explain any differences. If your sequence differed from the models, arrange to meet with your resource person to justify the sequence you selected.

NOTES

Learning Experience VI

FINAL EXPERIENCE

For an **actual teaching situation,*** develop student performance objectives.

Develop student performance objectives for a course or unit you are responsible for teaching. This will include—

- developing your own objectives or revising a list of existing objectives specified for the course or unit
- including objectives in each of the learning domains
- including objectives at various taxonomic levels
- ensuring that each objective includes all necessary components
- sequencing the objectives

After you have developed your sequenced list of student performance objectives, arrange to have your resource person review this list.

Your total competency will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 55–56.

Based upon the criteria specified in this assessment instrument, your resource person will determine whether you are competent in developing student performance objectives.

*For a definition of "actual teaching situation," see the inside back cover.

NOTES

TEACHER PERFORMANCE ASSESSMENT FORM

Develop Student Performance Objectives (B-2)

Name _____

Date _____

Resource Person _____

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

LEVEL OF PERFORMANCE

	N/A	None	Poor	Fair	Good	Excellent
Components:						
1. All objectives contained a statement of performance	☐	☐	☐	☐	☐	☐
2. Each performance statement contained an action verb	☐	☐	☐	☐	☐	☐
3. Each performance statement described the activity in which the student would be involved in sufficient detail to be understood	☐	☐	☐	☐	☐	☐
4. All objectives contained stated or implied conditions	☐	☐	☐	☐	☐	☐
5. The conditions in each objective were realistic in terms of the performance called for	☐	☐	☐	☐	☐	☐
6. All objectives specified criteria for achievement	☐	☐	☐	☐	☐	☐
7. The criteria in each objective were realistic in terms of the performance required	☐	☐	☐	☐	☐	☐
8. The criteria in each objective were realistic in terms of the conditions outlined	☐	☐	☐	☐	☐	☐
Domains:						
9. Cognitive domain objectives were included	☐	☐	☐	☐	☐	☐
10. Cognitive objectives that required more than mere recall were included	☐	☐	☐	☐	☐	☐
11. Psychomotor objectives were included	☐	☐	☐	☐	☐	☐
12. Psychomotor objectives were included that required more than mere imitation of the instructor	☐	☐	☐	☐	☐	☐
13. Affective domain objectives were included	☐	☐	☐	☐	☐	☐

	N/A	None	Poor	Fair	Good	Excellent
14. The affective objectives were realistic in terms of occupational requirements	☐	☐	☐	☐	☐	☐
15. The criteria for the affective objectives provided alternative ways for students to demonstrate the feelings/attitudes	☐	☐	☐	☐	☐	☐
Sequencing: 16. The objectives were arranged in a logical sequence	☐	☐	☐	☐	☐	☐
17. The sequence provided for the accomplishment of enabling objectives before terminal ones	☐	☐	☐	☐	☐	☐
18. The sequence facilitated student accomplishment of the objectives	☐	☐	☐	☐	☐	☐

Level of Performance: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

ABOUT USING THE NATIONAL CENTER'S PBTE MODULES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual teaching situation when you are an intern, a student teacher, an inservice teacher, or occupational trainer.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills that you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the introduction, (2) the objectives listed on p. 4, (3) the overviews preceding each learning experience, and (4) the final experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- That you do not have the competencies indicated and should complete the entire module
- That you are competent in one or more of the enabling objectives leading to the final learning experience and, thus, can omit those learning experiences
- That you are already competent in this area and are ready to complete the final learning experience in order to "test out"
- That the module is inappropriate to your needs at this time

When you are ready to complete the final learning experience **and** have access to an actual teaching situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange to (1) repeat the experience or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped, (2) repeating activities, (3) reading supplementary resources or completing additional activities suggested by the resource person, (4) designing your own learning experience, or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual Teaching Situation: A situation in which you are actually working with and responsible for teaching secondary or postsecondary vocational students or other occupational trainees. An intern, a student teacher, an inservice teacher, or other occupational trainer would be functioning in an actual teaching situation. If you do **not** have access to an actual teaching situation when you are taking the module, you can complete the module up to the final learning experience. You would then complete the final learning experience later (i.e., when you have access to an actual teaching situation).

Alternate Activity or Feedback: An item that may **substitute** for required items that, due to special circumstances, you are unable to complete.

Occupational Specialty: A specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity.

Optional Activity or Feedback: An item that is not required but that is designed to **supplement** and enrich the required items in a learning experience.

Resource Person: The person in charge of your educational program (e.g., the professor, instructor, administrator, instructional supervisor, cooperating/supervising/classroom teacher, or training supervisor who is guiding you in completing this module).

Student: The person who is receiving occupational instruction in a secondary, postsecondary, or other training program.

Vocational Service Area: A major vocational field: agricultural education, business and office education, marketing and distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher/Instructor: The person who is completing the module.

Levels of Performance for Final Assessment

N/A: The criterion was not met because it was **not applicable** to the situation.

None: No attempt was made to meet the criterion, although it was relevant.

Poor: The teacher is unable to perform this skill or has only **very limited ability** to perform it.

Fair: The teacher is unable to perform this skill in an acceptable manner but has **some ability** to perform it.

Good: The teacher is able to perform this skill in an **effective** manner.

Excellent: The teacher is able to perform this skill in a **very effective** manner.

Titles of the National Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation

A-1 Prepare for a Community Survey
A-2 Conduct a Community Survey
A-3 Report the Findings of a Community Survey
A-4 Organize an Occupational Advisory Committee
A-5 Maintain an Occupational Advisory Committee
A-6 Develop Program Goals and Objectives
A-7 Conduct an Occupational Analysis
A-8 Develop a Course of Study
A-9 Develop Long-Range Program Plans
A-10 Conduct a Student Follow-Up Study
A-11 Evaluate Your Vocational Program

Category B: Instructional Planning

B-1 Determine Needs and Interests of Students
B-2 Develop Student Performance Objectives
B-3 Develop a Unit of Instruction
B-4 Develop a Lesson Plan
B-5 Select Student Instructional Materials
B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution

C-1 Direct Field Trips
C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
C-4 Direct Students in Instructing Other Students
C-5 Employ Simulation Techniques
C-6 Guide Student Study
C-7 Direct Student Laboratory Experience
C-8 Direct Students in Applying Problem-Solving Techniques
C-9 Employ the Project Method
C-10 Introduce a Lesson
C-11 Summarize a Lesson
C-12 Employ Oral Questioning Techniques
C-13 Employ Reinforcement Techniques
C-14 Provide Instruction for Slower and More Capable Learners
C-15 Present an Illustrated Talk
C-16 Demonstrate a Manipulative Skill
C-17 Demonstrate a Concept or Principle
C-18 Individualize Instruction
C-19 Employ the Team Teaching Approach
C-20 Use Subject Matter Experts to Present Information
C-21 Prepare Bulletin Boards and Exhibits
C-22 Present Information with Models, Real Objects, and Flannel Boards
C-23 Present Information with Overhead and Opaque Materials
C-24 Present Information with Filmstrips and Slides
C-25 Present Information with Films
C-26 Present Information with Audio Recordings
C-27 Present Information with Televised and Videotaped Materials
C-28 Employ Programmed Instruction
C-29 Present Information with the Chalkboard and Flip Chart
C-30 Provide for Students' Learning Styles

Category D: Instructional Evaluation

D-1 Establish Student Performance Criteria
D-2 Assess Student Performance: Knowledge
D-3 Assess Student Performance: Attitudes
D-4 Assess Student Performance: Skills
D-5 Determine Student Grades
D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management

E-1 Project Instructional Resource Needs
E-2 Manage Your Budgeting and Reporting Responsibilities
E-3 Arrange for Improvement of Your Vocational Facilities
E-4 Maintain a Filing System
E-5 Provide for Student Safety
E-6 Provide for the First Aid Needs of Students
E-7 Assist Students in Developing Self-Discipline
E-8 Organize the Vocational Laboratory
E-9 Manage the Vocational Laboratory
E-10 Combat Problems of Student Chemical Use

Category F: Guidance

F-1 Gather Student Data Using Formal Data-Collection Techniques
F-2 Gather Student Data Through Personal Contacts
F-3 Use Conferences to Help Meet Student Needs
F-4 Provide Information on Educational and Career Opportunities
F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations

G-1 Develop a School-Community Relations Plan for Your Vocational Program
G-2 Give Presentations to Promote Your Vocational Program
G-3 Develop Brochures to Promote Your Vocational Program
G-4 Prepare Displays to Promote Your Vocational Program
G-5 Prepare News Releases and Articles Concerning Your Vocational Program
G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
G-7 Conduct an Open House
G-8 Work with Members of the Community
G-9 Work with State and Local Educators
G-10 Obtain Feedback about Your Vocational Program

Category H: Vocational Student Organization

H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations
H-2 Establish a Vocational Student Organization
H-3 Prepare Vocational Student Organization Members for Leadership Roles
H-4 Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities
H-5 Supervise Activities of the Vocational Student Organization
H-6 Guide Participation in Vocational Student Organization Contests

Category I: Professional Role and Development

I-1 Keep Up to Date Professionally
I-2 Serve Your Teaching Profession
I-3 Develop an Active Personal Philosophy of Education
I-4 Serve the School and Community
I-5 Obtain a Suitable Teaching Position
I-6 Provide Laboratory Experiences for Prospective Teachers
I-7 Plan the Student Teaching Experience
I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education

J-1 Establish Guidelines for Your Cooperative Vocational Program
J-2 Manage the Attendance, Transfers, and Terminations of Co-Op Students
J-3 Enroll Students in Your Co-Op Program
J-4 Secure Training Stations for Your Co-Op Program
J-5 Place Co-Op Students on the Job
J-6 Develop the Training Ability of On-the-Job Instructors
J-7 Coordinate On-the-Job Instruction
J-8 Evaluate Co-Op Students' On-the-Job Performance
J-9 Prepare for Students' Related Instruction
J-10 Supervise an Employer-Employee Appreciation Event

Category K: Implementing Competency-Based Education (CBE)

K-1 Prepare Yourself for CBE
K-2 Organize the Content for a CBE Program
K-3 Organize Your Class and Lab to Install CBE
K-4 Provide Instructional Materials for CBE
K-5 Manage the Daily Routines of Your CBE Program
K-6 Guide Your Students Through the CBE Program

Category L: Serving Students with Special/Exceptional Needs

L-1 Prepare Yourself to Serve Exceptional Students
L-2 Identify and Diagnose Exceptional Students
L-3 Plan Instruction for Exceptional Students
L-4 Provide Appropriate Instructional Materials for Exceptional Students
L-5 Modify the Learning Environment for Exceptional Students
L-6 Promote Peer Acceptance of Exceptional Students
L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students
L-8 Improve Your Communication Skills
L-9 Assess the Progress of Exceptional Students
L-10 Counsel Exceptional Students with Personal-Social Problems
L-11 Assist Exceptional Students in Developing Career Planning Skills
L-12 Prepare Exceptional Students for Employability
L-13 Promote Your Vocational Program with Exceptional Students

Category M: Assisting Students in Improving Their Basic Skills

M-1 Assist Students in Achieving Basic Reading Skills
M-2 Assist Students in Developing Technical Reading Skills
M-3 Assist Students in Improving Their Writing Skills
M-4 Assist Students in Improving Their Oral Communication Skills
M-5 Assist Students in Improving Their Math Skills
M-6 Assist Students in Improving Their Survival Skills

RELATED PUBLICATIONS

Student Guide to Using Performance-Based Teacher Education Materials
Resource Person Guide to Using Performance-Based Teacher Education Materials
Guide to the Implementation of Performance-Based Teacher Education
Performance-Based Teacher Education: The State of the Art, General Education and Vocational Education

For information regarding availability and prices of these materials contact—AAVIM, American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, University of Georgia, Athens, Georgia 30602, (404) 542-2586

ISBN 0-89606-125-6